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AUTHOR Peterson, Rosemary
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ABSTRACT

A rationale for teaching beginning reading from a learning theory perspective that is compatible with Jean Piaget's theory of cognitive development is presented in this paper. The model offered is based on a linguistic analysis and on current research. The logical thinking skills characteristic of each stage of development proposed by Piagetian theory are related to the model and contrasted with cognitive-based approaches to beginning reading. The continuing public concern for teaching the basic skills is discussed in terms of the three types of knowledge described by Piaget. The paper notes that current research with learning handicapped and culturally different children stresses the importance of differentiating decoding from those tasks appropriately labeled developmental. It concludes with suggestions for applications of these principles to beginning reading, remedial reading, and the bilingual classroom. (Author/FL)

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BEGINNING READING in ECE and the BILINGUAL CLASSROOM

Rosemary Peterson, Ph.D.
Assistant Professor and Coordinator of
EARLY CHILDHOOD EDUCATION

Saint Mary's College
Moraga, California 94575

A paper presented to the Tenth Annual UAP-USC Conference on Piagetian Theory and the Helping Professions, Los Angeles, California, February 1980

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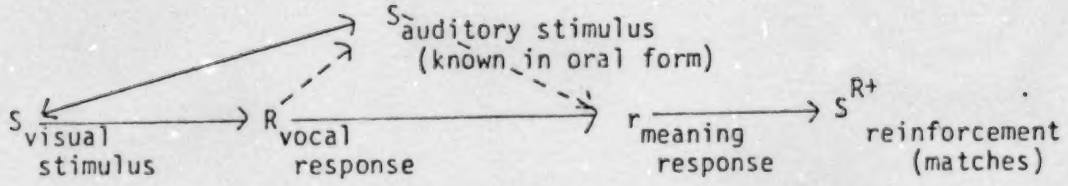
BEGINNING READING in ECE and the BILINGUAL CLASSROOM

Is beginning reading a cognitive or an associative task? This question has been debated for decades (Chall, 1967). With the widespread interest in Piaget's theory of intellectual development and its application to education, this controversy is again becoming a focal point of educators' concern. In the past, proponents of a look-say method have favored the cognitive definition; those supporting the code emphasis have stressed the associative. Now, in addition to advocates of particular teaching methods, we find educators who follow different theoretical perspectives taking up the debate. But are these approaches mutually exclusive?

It is the purpose of this paper to present a rationale for teaching beginning reading from a learning theory perspective. It is held that this approach is compatible with Piagetian theory and, in fact, is supported by it. Further, the paper addresses the concern of many parents that the basic skills are not being learned, especially by those children labeled culturally different and/or bilingual.

A Learning Theory Perspective

Research in beginning reading (Chall, 1967) has shown that children taught with a code emphasis have better word recognition skills, better spelling skills, and, in time, the code emphasis leads to easier reading with understanding. In this paper the term reading, therefore, emphasizes the skill of decoding. As decoding, reading is an associative skill. It involves the matching of a visual stimulus (the written word) with a self-produced auditory stimulus (the spoken word). As stated by the linguist Soffietti (1955), learning to read involves the perception and vocalization of written forms, recognizing which sounds are represented by the specific written forms, and matching these to meanings (words) already understood in their oral form (speech).



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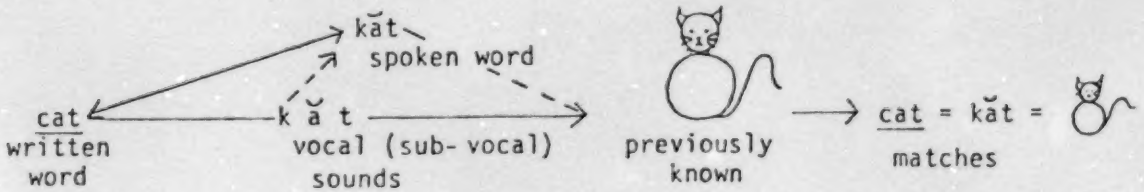

Another linguist, Fries (1962, p. 120) says that learning to read "...is the process of transfer from auditory signs for the language signals which the child has already learned to the new visual signs for the same signals," (emphasis mine).

From this perspective, one implication for the non-English speaking (NES) and limited English speaking (LES) child is clear -- if reading is based on oral language and the matching of the visual and auditory stimuli, the child must be reading in the language for which he or she has oral referents.

RELATION TO PIAGETIAN THEORY

The work of Jean Piaget and his colleagues in the field of child development has had much influence on educational thought. According to Piaget (Piaget and Inhelder, 1969), children's thinking is both qualitatively and quantitatively different from adults'. As thinking progresses from infancy to adolescence, four major stages have been defined.

Sensori-Motor Stage: Birth to 2 years

The child relies on touching, feeling and his senses to find out about the world. Object permanence, learning that things continue to exist independently of his perception of them or action on them, is developed by the child during this stage.

Preoperational Stage: 2 to 7 years

Although the child still relies on using the senses, he is increasingly able to use language and words to represent things not present. Rather than using logic, the preoperational child reasons and explains events on the basis of intuition of hunches and how things look to him. Piaget calls this transductive reasoning. The child reasons from particular to particular. If things/events appear to the child to occur together, he will say one causes the other. "It can't be night because I'm not in bed." Learning is based on association.

Concrete Operational Stage: 7 to 11 years

The child is developing the concepts of number, relationships, processes and so on. He is becoming able to think problems through mentally, though still in terms of concrete or real objects and his experience with them, rather than in abstractions. As he has repeated experience with things, he is able to see patterns and make generalizations. He begins to use inductive thought (reasoning from part to whole) and is able to apply rules.

Formal Operations Stage: 11 years on

The child in formal operations is no longer tied to the concrete; he can now think in terms of abstractions and possibilities. He can hypothesize and systematically isolate variables. Because he can now think about his thought, logical deduction is possible and can be justified on the basis of orderly thinking. He is reaching the level of potential adult thought.

Reading, begun on an associative basis, is consistent with the logical thinking skills displayed by preoperational children. Further, these associations (sounds the letters make) can be used to form the basis of later (concrete operational) generalizations.

For example, there are many word patterns or families in the English language. One such family is *at*. Assuming a child has learned the sounds of the consonants and of short a, and has been blending sounds into words, he can sound out: *at, cat, bat, fat, hat, mat, pat, rat, sat, vat.* He may not clearly understand the relationship between these words, but he is, nevertheless, decoding successfully.

As the learner develops abilities in inductive logic (concrete operations), the relationship between the letter-sound patterns becomes clear -- not just for these specific words, but for all the many word families that have been learned. Phonics can be used as mediators. The reader no longer needs to sound out each word, but can apply generalizations to whole groups of words. The sight method learner must still memorize each and every word until he can work out a system for mediating responses.

The NES and LES child will naturally use those rules he has devised or been taught which are appropriate for his primary language. The teacher needs to point out these differences in a way that allows the child to use the appropriate rule for each language. For example, in English, a possessive adjective need only agree with the possessor (his book, his pencils), not the number of objects to which reference is made (his books, his pencils). In many languages, the possessive adjective must agree with the object -- su libro (his book), but sus libros (his books); su lapiz (his pencil), sus lapices (his pencils).

Some children who learn by the sight method do eventually teach themselves phonics and use them to mediate their reading skills. Research (Chall, 1967) has shown that these are usually bright and/or high socioeconomic background learners. These self-taught relationships are usually not as clear and the structure not as apparent as when the readers are given assistance. Often, too, in times of stress the self-taught children will revert to guessing, an earlier device. For children who have been taught with a code emphasis, the switch to using phonics as mediators usually occurs in the first or second grade (when entering concrete operations). For those who must work out their own system, third and fourth grades are a more realistic time for this to occur, if indeed it does at all.

BEGINNING READING AS A SKILL

Rather than teaching phonics by association, why not wait until the stage of concrete operations when a child can discover and use these

relationships effectively? Many skills learned by association are fundamental to higher-level cognitive tasks. These skills are necessary prerequisites and many can and should be taught. Reading begun on an associative basis can be changed by the child into a cognitive task as the stage of concrete operations is reached.

With the increased interest in Piaget's theories, this issue has become even more confused. Many educators are stressing the importance of learning by discovery instead of the teaching of skills. These two positions are not incompatible, although many educators have assumed they are.

Because Piaget has focused on the necessity of children discovering logico-mathematical relationships, too many Piagetian-inspired educators have wrongly applied this idea to skills.

DIFFERENT KINDS OF KNOWLEDGE

As emphasized by Felton and Peterson (1976), there are three main types of knowledge which traditional teaching has not differentiated, but which require different learning processes by the child (Piaget and Inhelder, 1969). Some aspects can be taught in the traditional sense, but others cannot be taught; they must be discovered and learned through experiencing.

	SOCIAL LEARNING	PHYSICAL LEARNING	LOGICO-MATHEMATICAL RELATIONSHIPS LEARNING
Focus:	Includes: -names of objects -social customs, (manners, rules, dress, morals). -skill learning (spelling, reading, arithmetic). -facts, dates, etc. In short: Things learned by association, rather than logic.	Deals with: -physical world -nature of objects, e.g., to learn that a wheel rolls, what a magnet attracts, what floats, sinks, etc. In short: The child learns about objects by acting on them and observing what happens as a result of his actions.	Involves: creating and inventing relationships between objects and symbols. All ways of organizing reality are part of this kind of knowledge. e.g., classifying objects, comparing amounts, comparing sizes, comparing and evaluating different points of view, conservation, one-to-one correspondence, class inclusion, number concepts and rule learning (ten cups are the same number even if spread out to cover a wider area).
Role of Teacher:	Requires teaching by others. Emphasis on rote learning.	Requires child having experience with concrete objects. Teachers can provide many opportunities for children to learn by discovery. Can be learned verbally and, in some instances, this is more practical, e.g., "If you are hit by a car, you will be hurt."	Cannot be taught by others because it is not transmitted by simple feedback from people or objects as are social and physical learning. Instead, it is a complex, ongoing process in which the child imposes his present point of view on the problem and integrates his new experiences with his earlier concepts. The child can be trained to respond by rote, but true understanding comes from within the child's own experience.

For California educators, the need to differentiate the kinds of knowledge is becoming increasingly clear. For many years, California's children were taught arithmetic. They had good state-wide test scores in arithmetic skills, but poor scores in mathematical concepts. As knowledge of Piaget's work spread, the arithmetic-math score discrepancy was viewed from a Piagetian perspective, albeit an incomplete one. Because it was acknowledged that children can't be taught logico-mathematical relationships with understanding, new curriculum was designed to foster the children's discovery of mathematical concepts. When the children were tested after a suitable period of working with the new mathematics curriculum, it was found that they had acquired good mathematical concept scores, but poor arithmetic skill scores. When viewed from a perspective which differentiates the various kinds of knowledge, these results are not surprising. The principles of phonics, like number facts, can be learned by association and must be practiced in a more or less rote fashion.

WHEN TO BEGIN

Learning by association does not require a child to be at any particular stage of development. Many children have great difficulty in school precisely because it is assumed that by the age of 7, they have entered the concrete operational stage. Although much of the new curriculum has been designed with Piaget's principles as the basis, it unfortunately assumes that children from 7 to 11 years old are in the concrete operational stage and those over 11 are in formal operations. Much research (Sund 1976, Kohlberg and Gilligan 1972) has shown that this is not the case. Unpublished research by teachers of children designated "learning handicapped" has shown that many of these children are in the preoperational stage of mental development at ages ranging from 8 to 21 years. Many can *read* and do *simple arithmetic* at an elementary level; few can *understand* mathematical *concepts* even with as many as seven years of remediation and special teaching.

For all children, learning by association depends on repetition and this repetition takes time. Further, children come to first grade

to learn to read -- at no other time will they be so highly motivated. This motivation should be capitalized on, it will not wait until the child reaches concrete operations. If a child comes to first grade to learn to read, he should go home the first day with the idea that he can read.

When reading skills are not acquired, children become subject to pressure, increasingly so as they get older. "We didn't mind Johnny not reading in kindergarten or first grade, but he's 8 years old now and should be reading!" Teachers, too, might feel relaxed in kindergarten, first, or even second grade, but reading achievement has long been and continues to be a major criterion for determining success in school and the worth of school programs (Riles, 1974). In addition, other subject matter areas such as math, social studies, and science require reading. The child will be slowed down in these areas unless he can read. In our present day school system, reading is THE fundamental tool for academic success.

For parents of culturally different children, the problem may be intensified. They are concerned by their children's lack of skill in the fundamentals (Mazan, 1975). Research has shown that many of these learners possess the appropriate mediators to perform cognitive tasks but fail to produce them when needed (Flavell, Beach, and Chinsky, 1966). Although research in this area is limited, training in the area of phonics would seem to produce a much desired learning set. Wher repeated and reinforced over time, as it would be in the classroom, it would lead to production of active mediators on the part of most children. The importance of this type of repetition for the culturally different learner has been substantiated by Wright and Nuthall (1970). Successful training in the use of mediators with an associative method, as carried out by Peterson (1972), supports the learning set hypothesis. Illustrative of the problems involved in the practice of waiting until the concrete operations period before beginning reading instruction is the additional finding by Peterson that without training, children of 9 and 10 years of age were unable to perform class inclusion tasks. If we wait for these competencies to manifest themselves before beginning reading instruction, we may well wait until a child is in junior high school (a position suggested by Rohwer, 1970).

Kohlberg (1968), a psychologist who clearly belongs to the cognitive theorist school, states that early reading is desirable on the basis of discrimination and association. It frees the child's time for cognitively more valuable activities than the mechanics of reading and writing in elementary school.

"The concept of readiness is not bad, but I am not sure it can be applied to reading. Reading aptitude may not be related to mental age." This quote is from Piaget (1970), the acknowledged leader in the field of cognitive development and children's learning.

In summary, major linguists, psychologists in the field of learning and developmental psychologists offer support to the view that beginning reading is a skill that can be taught on the basis of association. Waiting until the child reaches the stage of concrete operations is not only a waste of the child's time, but may accentuate the differences in school success between lower and middle SES children.

REFERENCES

Chall, J., Learning to Read, The Great Debate, New York: McGraw Hill, 1967.

Felton, V. & Peterson, R., Piaget: A handbook for parents and teachers of children in the age of discovery; preschool-third grade, Moraga, California: Mulberry Tree Books, 1976.

Flavell, J. H., Beach, D. R., & Chinsky, J. M., Spontaneous verbal rehearsal in a memory task as a function of age. Child Development, 37, 283-299, 1966.

Fries, C., Linguistics and Reading, New York: Holt, Rinehart and Winston, Inc., 1962.

Kohlberg, L., Early education: a cognitive developmental view. Child Development, 39, 1013-1062, 1968.

Kohlberg, L. and Gilligan, C., The adolescent as a philosopher: The discovery of self in a post conventional world. In J. Kagan and R. Coles (Eds.). Twelve to Sixteen: Early Adolescence, New York: W. W. Norton & Co., Inc., 1972.

Mazan, R., Speech given at the California Council for the Education of Teachers, San Diego, California, April, 1975.

Peterson, R., The effects of categorization training and class inclusion training on children's use of categories in free recall. Unpublished doctoral dissertation, University of California, Berkeley, 1972.

Piaget, J., A conversation with Jean Piaget and Barbel Inhelder, Today's Psychology, 3, 25-32, 1970.

Piaget, J., & Inhelder, B., The Psychology of the Child, New York: Basic Books, 1969.

Riles, W., California State Superintendent of Public Instruction. Address to the 26th Annual State Conference on Educational Research, California Teacher's Association, San Francisco, California, November, 1974.

Rohwer, W., Jr., On attaining the goals of early childhood education. Paper presented at OEO Conference on Research on Early Childhood Education, Washington, D. C., 1970.

Soffietti, J. P., Why children fail to read: a linguistic analysis. Harvard Educational Review XXV No. 2, 69-72, 1955.

Sund, R. B., Piaget for Educators: A Multimedia Program, Columbus, Ohio, Charles E. Merrill, 1976.

Wright, C. J., and Nutall, G., Relationships between teacher behaviors and pupil achievement in three experimental elementary science lessons, American Educational Research Journal, 7, 447-491, 1970. In M. J. Dunkin and B. J. Biddle, eds., The Study of Teaching, New York: Holt, Rinehart & Winston, Inc., 1974.